

What is Claimed is:

1. A method for controlling transmission power from a wireless transceiver, the method comprising:
 - 5 estimating signal to interference ratios (SIRs) for a signal received from another wireless device;
 - identifying an out-of-sync condition between the wireless transceiver and the other wireless device based on the SIRs;
 - restricting change of the transmission power from the wireless transceiver based
10 on the SIRs and when an out-of-sync condition has not been identified.
2. The method of Claim 1, wherein the restricting change of the transmission power is based on the SIRs changing more than a predetermined threshold over a predetermined time.
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3. The method of Claim 1, wherein:
 - the identifying an out-of-sync condition comprises comparing the SIRs to an out-of-sync threshold; and
 - the restricting change of the transmission power comprises comparing the SIRs
20 to a transmission limit threshold.
4. The method of Claim 3, wherein the out-of-sync threshold is greater than the transmission limit threshold.
- 25 5. The method of Claim 3, wherein the out-of-sync threshold is less than the transmission limit threshold.
6. The method of Claim 3, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on slot format.
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7. The method of Claim 3, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on whether the wireless transceiver is in soft handover.

8. The method of Claim 3, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on whether the wireless transceiver is in a compressed mode.

5 9. The method of Claim 1, wherein:

the identifying an out-of-sync condition comprises first filtering the SIRs, and at least substantially reducing the transmission power from the wireless transceiver when first filtered SIRs fall below an out-of-sync threshold; and

10 the restricting change of the transmission power comprises second filtering the SIRs, and restricting change of the transmission power from the wireless transceiver when the second filtered SIRs fall below a power limit threshold.

10. The method of Claim 9, wherein the second filtered SIRs more closely follow abrupt SIR changes than the first filtered SIRs.

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11. The method of Claim 9, further comprising removing at least a portion of bias from the SIRs.

12. The method of Claim 11, wherein the removing at least a portion of bias from the SIRs is performed before the first filtering and the second filtering.

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13. The method of Claim 11, wherein the removing at least a portion of bias from the SIRs is performed after the first filtering and the second filtering.

25 14. The method of Claim 1, further comprising:

reducing the transmission power from the wireless transceiver to about zero when the SIRs fall below an out-of-sync threshold; and

restricting change of the transmission power from the wireless transceiver when the SIRs fall below an offset threshold relative to the out-of-sync threshold.

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15. The method of Claim 1, further comprising removing at least a portion of bias from the SIRs.

16. The method of Claim 15, the wireless transceiver including a RAKE receiver having a plurality of RAKE fingers, and wherein:

the estimating signal to interference ratios (SIRs) for a received signal is based on a number of the RAKE fingers of the RAKE receiver used to receive the signal; and

5 the removing at least a portion of bias from the SIRs is based on the number of RAKE fingers.

17. The method of Claim 15, the wireless transceiver including a RAKE receiver, and wherein:

10 the estimating signal to interference ratios (SIRs) for a received pilot signal is based on a number of dedicated pilot channel symbols in the received pilot signal; and

the removing at least a portion of bias from the SIRs is based on the number of dedicated pilot channel symbols.

15 18. A wireless transceiver comprising:

an SIR estimator that is configured to estimate SIRs for a signal received from another wireless device;

an out-of-sync detector that is configured to identify an out-of-sync condition between the wireless transceiver and the other wireless device based on the SIRs;

20 a transmitter that is configured to transmit at an adjustable transmission power level; and

a power limit detector that is configured to restrict a change of the transmission power level of the transmitter based on the SIRs and when an out-of-sync condition has not been identified.

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19. The wireless transceiver of Claim 18, wherein the power limit detector is further configured to restrict a change of the transmission power level by the transmitter based on the SIRs changing more than a predetermined threshold over a predetermined time.

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20. The wireless transceiver of Claim 18, wherein:

the out-of-sync detector is further configured to compare the SIRs to an out-of-sync threshold; and

the power limit detector is further configured to compare the SIRs to a transmission limit threshold.

21. The wireless transceiver of Claim 20, wherein the out-of-sync threshold
5 is greater than the transmission limit threshold.

22. The wireless transceiver of Claim 20, wherein the out-of-sync threshold is less than the transmission limit threshold.

10 23. The wireless transceiver of Claim 20, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on slot format.

24. The wireless transceiver of Claim 20, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on whether the wireless
15 transceiver is in soft handover.

25. The wireless transceiver of Claim 20, wherein at least one of the out-of-sync threshold and the transmission limit threshold is based on whether the wireless transceiver is in a compressed mode.
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26. The wireless transceiver of Claim 18, further comprising:
an out-of-sync filter that is configured to filter the SIRs, and the out-of-sync detector is further configured to at least substantially reduce the transmission power level of the transmitter when the filtered SIRs from the out-of-sync filter fall below an
25 out-of-sync threshold; and

a transmission limit filter that is configured to filter the SIRs, and the power limit detector is configured to restrict a change of the transmission power level of the transmitter when the filtered SIRs from the out-of-sync filter fall below a power limit threshold.
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27. The wireless transceiver of Claim 26, wherein the transmission limit filter is configured so that the SIRs filtered by the transmission limit filter more closely follow abrupt SIR changes than the SIRs filtered by the out-of-sync filter.

28. The wireless transceiver of Claim 26, further comprising a bias removal module that is configured to remove at least a portion of bias from the SIRs.

29. The wireless transceiver of Claim 28, wherein the bias removal module
5 is configured to remove at least a portion of bias from the SIRs before the SIRs are filtered by the out-of-sync filter and the transmission limit filter.

30. The wireless transceiver of Claim 28, wherein the bias removal module
10 is configured to remove at least a portion of bias from the SIRs after the SIRs are filtered by the out-of-sync filter and the transmission limit filter.

31. The wireless transceiver of Claim 18, wherein:
the out-of-sync detector is further configured to at least substantially reduce the
transmission power level of the transmitter when the SIRs fall below an offset threshold
15 relative to an out-of-sync threshold; and
the power limit detector is configured to restrict a change of the transmission
power level of the transmitter when the SIRs fall below a power limit threshold.

32. The wireless transceiver of Claim 18, further comprising a bias removal
20 module that is configured to remove at least a portion of bias from the SIRs.

33. The wireless transceiver of Claim 32, further comprising a RAKE
receiver having a plurality of RAKE fingers, and wherein the SIR estimator is further
configured to estimate SIRs for a received signal based on a number of the RAKE
25 fingers used to receive the signal, and wherein the bias removal module is further
configured to remove at least a portion of bias from the SIRs based on the number of
RAKE fingers.

34. The wireless transceiver of Claim 32, further comprising a RAKE
30 receiver, and wherein the SIR estimator is further configured to estimate SIRs for a
received signal based on a number of dedicated pilot channel symbols in the received
pilot signal, and wherein the bias removal module is further configured to remove at
least a portion of bias from the SIRs based on the number of dedicated pilot channel
symbols.

35. A computer program product for controlling transmission power from a wireless transceiver, the computer program code comprising:

5 program code for estimating signal to interference ratios (SIRs) for a signal received from another wireless device;

program code for identifying an out-of-sync condition between the wireless transceiver and the other wireless device based on the SIRs; and

10 program code for restricting change of the transmission power from the wireless transceiver based on the SIRs and when an out-of-sync condition has not been identified.

36. The computer program product according to Claim 35, further comprising program code for restricting change of the transmission power based on when the SIRs change more than a predetermined threshold over a predetermined time
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37. The computer program product according to Claim 35, wherein:
the program code for identifying an out-of-sync condition comprises program code for comparing the SIRs to an out-of-sync threshold; and
the program code for restricting change of the transmission power comprises
20 program code for comparing the SIRs to a transmission limit threshold.

38. The computer program product according to Claim 35, wherein:
the program code for identifying an out-of-sync condition comprises program code for first filtering the SIRs, and at least substantially reducing the transmission
25 power from the wireless transceiver when first filtered SIRs fall below an out-of-sync threshold; and
the program code for restricting change of the transmission power comprises program code for second filtering the SIRs, and restricting change of the transmission power from the wireless transceiver when the second filtered SIRs fall below a power
30 limit threshold.